THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER J. WILK
and
CARY W. SCHNEEBAUM

Appeal No. 95-3598
Application 08/125,671[1]

ON BRIEF

Before MEISTER, ABRAMS and FRANKFORT, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

[1] Application for patent filed September 23, 1993.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 4 and 7 through 25, all of the claims remaining in this application. Claims 2, 3, 5 and 6 have been canceled.

The subject matter on appeal is directed to a laparoscopic surgical apparatus and a laparoscopic surgical method. Claims 1 and 18 are illustrative of the subject matter on appeal and a copy of those claims, as reproduced from the Appendix to appellants' brief, is attached to this decision.

The prior art references relied upon by the examiner in rejecting the appealed claims are:

Vise	3,845,771	Nov. 5, 1974
Zarudiansky	4,302,138	Nov. 24, 1981

Scott S. Fisher (Fisher), "Telepresence master glove controller for dexterous robotic end-effectors," 726 Intelligent Robots and Computer Vision 396-399 (1986).

Claims 1, 4 and 7 through 25 stand rejected under 35 U.S.C. § 112, first paragraph, as being based on a

specification which fails to provide an adequate written description of

the invention and fails to adequately teach how to make the invention. In addition, with regard to independent claims 1 and 11 and the claims which depend therefrom, the examiner urges that the specification, as originally filed, fails to provide support for the invention as now claimed.

Claims 1, 11 through 13 and 18 through 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Fisher publication.

Claims 4, 7 through 10, 14 through 17 and 21 through 25 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Fisher publication as applied to claims 1, 11 through 13 and 18 through 20 above, and further in view of Zarudiansky and Vise.

Rather than reiterate the examiner's full statement of the above-noted rejections and the conflicting viewpoints

advanced by the examiner and appellants regarding those rejections, we make reference to the examiner's answer (Paper No. 7, mailed March 16, 1995) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 6, filed February 24, 1995) and reply brief (Paper No. 9, filed May 15, 1995) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review we have reached the determinations which follow.

Looking to the examiner's rejection of the appealed claims under 35 U.S.C. § 112, first paragraph, we understand this rejection to be based on both lack of enablement and on the lack of a written description to support the invention as now claimed. With regard to the first of these grounds of rejection, we observe that the first paragraph of 35 U.S.C. § 112 requires, inter alia, that the specification of a patent (or an applica-

tion for patent) enable any person skilled in the art to which it pertains to make and use the claimed invention. Although the statute does not say so, enablement requires that the specification teach those skilled in the art to make and use the invention without "undue experimentation." In re Wands, 858 F.2d 731, 737,

8 USPQ2d 1400, 1404 (Fed. Cir. 1988). That some experimentation may be required is not fatal; the issue is whether the amount of experimentation required is "undue." Id. at 736-37, 8 USPQ2d at 1404.

Moreover, in rejecting a claim for lack of enablement, it is well settled that the examiner has the initial burden of producing reasons that substantiate the rejection. See In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982); In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). Once this is done, the burden shifts to the appellant to rebut this conclusion by presenting evidence to prove that the disclosure in the specification is enabling. See In re Doyle, 482 F.2d 1385, 1392, 179 USPQ 227, 232 (CCPA 1973); cert. denied,

416 U.S. 935 (1974); In re Eynde, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973).

In the case before us, we believe the examiner has not met his burden of advancing acceptable reasons inconsistent with enablement. While we appreciate the examiner's discomfiture over the somewhat schematic illustration of the invention in appellants' drawings, the lack of specific disclosure concerning exactly how the fingers are attached to the distal end portion of each of the laparoscopic instruments, exactly how the fingers are articulated in a working manner, and the paucity of details concerning how a device of the small proportions required for introduction through a laparoscopic trocar sleeve might be fabricated and operatively attached to the various required linkages and control mechanisms, we nonetheless do not find that these issues individually or collectively rise to the level of non-enablement.

It is our opinion that the level of skill in this art (i.e, the art of micro-robotics) is sufficiently high that the

ordinarily skilled artisan would have been able to fashion a laparoscopic surgical apparatus of the type defined in appellants' claims on appeal based on appellants' disclosure, without the exercise of undue experimentation, and that such device would be capable of operation in the manner claimed and disclosed by appellants. In this regard, we point to, and note our agreement with appellants' arguments on pages 8 through 13 of the brief and in the reply brief. Like appellants, we note that the examiner's concern over the use of prior art references to support appellants' view of the level of knowledge in the art is misplaced in a consideration of whether one skilled in the art would have been

able to make and use the invention disclosed and claimed without undue experimentation. The mere fact that material extraneous to the originally filed disclosure, but known to those of ordinary skill in the art at the time of filing of the application, might be relied upon by the artisan in making and using the disclosed laparoscopic surgical apparatus is not fatal. As the Court made clear in In re Gaubert, 524 F.2d 1222, 1226, 187 USPQ 664, 667 (CCPA 1975), citing Martin v. Johnson, 454 F.2d 746, 751,

172 USPQ 391, 395 (1972),

> [e]nablement is the criterion, and every detail need not be set forth in the written specification if the skill in the art is such that the disclosure enables one to make the invention.

The statements by the examiner regarding appellants' use of the prior art cited by the examiner to show what one of ordinary skill in the art would be expected to know and how one skilled in the art would go about making the claimed invention, evidences to us that the examiner's basis for this rejection is premised on the mistaken belief that only material set forth expressly in appellants' disclosure is available to demonstrate enablement. As the case law cited supra, and in appellants' brief clearly indicates, that belief on the examiner's part is in error. When this error is coupled with the arguments of

appellants noted above and the fact that the examiner has never stated, maintained or established that a person of ordinary skill in the art would be incapable of making and using the disclosed invention without the exercise of undue experimentation, we are

led to the conclusion that the examiner here has failed to provide acceptable reasoning which establishes non-enablement.

For the above reasons, we will not sustain the examiner's rejection of claims 1, 4 and 7 through 25 under 35 U.S.C. § 112, first paragraph, as being directed to a non-enabling disclosure.

With regard to the second of the examiner's grounds of rejection under 35 U.S.C. § 112, first paragraph (i.e., that the specification, as originally filed, fails to provide support for the invention as now claimed in independent claims 1 and 11), we note that as stated in In re Bowen, 492 F.2d 859, 864, 181 USPQ 48, 52 (CCPA 1974), the description requirement of 35 U.S.C. § 112, first paragraph, "is that the invention claimed be described in the specification as filed." It is not necessary that the claimed subject matter be described identically, but the disclosure originally filed must convey to those skilled in the

art that the applicant had invented the subject matter later claimed. See In re Wilder, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984) cert. denied, 469 U.S. 1209 (1985).

In this instance, we are in agreement with the examiner that the disclosure as originally filed would not convey to those skilled in the art that appellants had invented the subject matter now claimed. Independent claim 1 sets forth a cauterization means including a laser-transmitting optical fiber that is at least partially connected to the laparoscopic instrument at the distal end portion and, as added in the amendment filed August 1, 1994 (Paper No. 3), further indicates that the laser-transmitting optical fiber is connected to the instrument "independently of motions of said fingers in response to said actuator means." A similar limitation is set forth in independent claim 11 regarding a fluid transfer means being at least partially connected to the laparoscopic instrument at the distal end portion "independently of motions of said fingers in response to said actuator means."

In the specification and in Figure 3 of the application drawings, it is clearly indicated that the laser-transmitting optical fiber (66) and the fluid transfer tube (71) are each attached to one of the manipulating fingers (75 and 74, respectively) and extend to a tip thereof. Given this disclosure, we see no way that these elements can be said to be connected to the distal end portion of the laparoscopic instrument "independently of motions of said fingers in response to said actuator means." On the contrary, the connection of these elements to the distal end of the instrument in the manner disclosed clearly will require that those elements move with the fingers to which they are attached in response to movement of the fingers by the actuator means.

Appellants' assertion in the brief and reply brief that these limitations are intended to distinguish prior art according to which an instrument (such as a laser-transmitting optical fiber or a fluid transfer tube) may be grasped by the fingers of a robotic hand, has been considered. However, we are not convinced by appellants' argument that the language used in these

claims merely conveys that the attached instruments remain attached to the laparoscopic robotic hand irrespective of motions of the fingers. From our perspective, the clear import of the claim language in claims 1 and 11 on appeal is that the

cauterization means and the fluid transfer means are connected to the distal end portion of the instrument "independently of motions of said fingers in response to said actuator means," i.e., that the fingers may be moved by the actuator means without the cauterization means and the fluid transfer means being moved at the same time. This is clearly not what the originally filed disclosure of appellants' application would have conveyed to one of ordinary skill in the art.

In accordance with the foregoing, we will sustain the examiner's rejection of independent claims 1 and 11, and of the claims which depend therefrom (i.e., claims 4, 7 through 10 and 12 through 17) under 35 U.S.C. § 112, first paragraph, based on the lack of a written description supporting the invention as now claimed.

We next look to the examiner's prior art rejection of appealed claims 1, 11 through 13 and 18 through 20 under 35 U.S.C. § 103 as being unpatentable over the Fisher publication. In this regard, the examiner has taken the position that given the general knowledge and recognition of the sizing of tools and instrumentation for laparoscopic procedures, one of ordinary skill in the art would "recognize the potential of the robotic tools and instrumentation of the Fisher teaching for laparoscopic use, particularly in a conceptual sense . . ." (answer, page 9) thereby rendering appellants' claimed invention obvious. We do not agree.

The law followed by our court of review, and thus by this Board, is that "[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). See also In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984) ("In determining whether a case of prima facie obviousness exists, it

is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.")

Absent reliance on appellants' own disclosure, our review of the Fisher publication applied by the examiner reveals no teaching, suggestion, or incentive which would have led one of ordinary skill in the art to modify the robotic surgical device

seen on page 6 of the Fisher publication, or only the arms and hands of such a robotic device, so as to provide a laparoscopic instrument having a distal end insertable through a laparoscopic trocar sleeve into an abdominal cavity of a patient, as is required in appellants' independent claims 1 and 11 on appeal. With regard to appellants' method claim 18, we find nothing in the Fisher publication that relates in any way whatsoever to a laparoscopic surgical method comprising, inter alia, the steps of providing a laparoscopic instrument having a distal end portion including a plurality of at least partially opposable articulated manipulating fingers, and inserting said distal end portion through a laparoscopic trocar sleeve into an abdominal cavity of

a patient. For these reasons alone, we would refuse to sustain the examiner's rejection of claims 1, 11 through 13 and 18 through 20 under 35 U.S.C. § 103 based on the Fisher publication, since we consider that the examiner has engaged in the impermissible use of hindsight in concluding that appellants' claimed invention would have been obvious from the disclosure of the Fisher publication.

Moreover, we must also agree with appellants that none of the references relied upon by the examiner, whether viewed individually or collectively, would have suggested using a robotic instrument like that of the claims on appeal in laparoscopic surgery, or disclose or suggest a laser-transmitting optical fiber for cauterizing organic tissue (claim 1), or a fluid transfer means for conveying fluid between a patient's abdominal cavity and an environment external to the patient (claim 11), connected to the distal end of such an instrument in the manner set forth in claims 1 and 11 on appeal. Thus, even when the teachings of Zarudiansky and Vise are taken into consideration in the rejection of claims 4, 7 through 10, 14

through 17 and 21 through 25 under 35 U.S.C. § 103, these references do not supply the deficiencies noted above with regard to the Fisher publication.

Accordingly, we conclude that the examiner has failed to make out even a prima facie case of obviousness with regard to the subject matter of claims 1, 4 and 7 through 25 on appeal.

To summarize our decision, we note that the examiner's rejection of appealed claims 1, 4 and 7 through 25 under 35 U.S.C. § 112, first paragraph, based on lack of an enabling disclosure has been reversed, but that the rejection of claims 1, 4, 7 through 10 and 11 through 17 under 35 U.S.C. § 112, first paragraph, based on the lack of a written description supporting the invention as now claimed has been sustained. The examiner's rejections of the appealed claims under 35 U.S.C. § 103 have not been sustained.

It follows from the foregoing that the decision of the examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JAMES M. MEISTER Administrative Patent Judge	)	
NEAL E. ABRAMS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
CHARLES E. FRANKFORT Administrative Patent Judge	)	

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APPENDED CLAIMS

1. A laparoscopic surgical apparatus comprising:

a laparoscopic instrument having a distal end portion insertable through a laparoscopic trocar sleeve into an abdominal cavity of a patient, said distal end portion including a plurality of at least partially opposable articulated manipulating fingers;

a glove having a plurality of hollow finger parts;

position sensing means operatively connected to said glove for detecting positions and configurations of said hollow finger parts upon insertion of a surgeon's hand into said glove and upon movement of said finger parts by said surgeon during a laparoscopic procedure;

actuator means operatively connected to said sensing means and to said instrument for moving said manipulating fingers to essentially duplicate positions and configurations of said finger parts in response to signals from said sensing means; and

cauterization means including a laser-transmitting optical fiber for cauterizing organic tissues of the patient, said optical fiber being at least partially connected to said instrument at said distal end portion independently of motions of said fingers in response to said actuator means.

18. A laparoscopic surgical method comprising the steps of:

providing a laparoscopic instrument having a distal end portion including a plurality of at least partially opposable articulated manipulating fingers;

inserting said distal end portion through a laparoscopic trocar sleeve into an abdominal cavity of a patient;

automatically detecting positions and configurations of a surgeon's fingers upon movement of said surgeon's fingers outside of the patient during a laparoscopic procedure; and

automatically moving said manipulating fingers to essentially duplicate positions and configurations of the surgeon’s fingers in response to signals from said sensing means.